

EXHIBIT A

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EMPLOYMENT

Jan 00–present **Professor**, Department of Computer Science, Columbia University, New York, NY 10027.

Jan 91–Dec 99 **Associate Professor**, Department of Computer Science, Columbia University, New York, NY 10027.

Sep 85–Dec 90 **Assistant Professor**, Department of Computer Science, Columbia University, New York, NY 10027.

Sep 77–Aug 85 **Research and Teaching Assistant**, Department of Computer Science, Brown University, Providence, RI 02912.

74–75 **Musician/Composer**, Rhode Island Feminist Theatre, Providence, RI 02906.

71–73 **Musician**, New Music Ltd., Providence, RI 02906.

EDUCATION

Ph.D., Computer Science, Brown University, 1987.

A.B., Music, Brown University, 1973.

JOURNAL PAPERS

Feiner, S., Nagy, S., and van Dam, A. An experimental system for creating and presenting interactive graphical documents. *ACM Transactions on Graphics*, 1(1), January 1982, 59–77.

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Interactive graphical documents. *The New Graphics*, MIT Visible Language Workshop, Cambridge, MA, July 31, 1981.

Research in graphical documents at Brown University. INRIA Rocquencourt, Le Chesnay, France, October 16, 1981.

Interactive technical documentation. *1st Conf./Workshop on Integrating CAD/CAM and Electronic Publishing*, Graphic Communications Association, Boston, MA, April 19–20, 1982.

Designing an “electronic book.” *Applied Semiotics for Design '82*, Rhode Island School of Design, Providence, RI, July 11–16, 1982.

Interactive documents and automated authoring. *2nd Conf. on Design and the Information Environment*, Minneapolis College of Art and Design, Minneapolis, MN, October 7–9, 1982.

Research in integrated text and graphics at Brown University. *IBM Engineering/Scientific Study Conference*, Poughkeepsie, NY, November 8–10, 1982.

DIAL: A diagrammatic animation language. ACM SIGGRAPH/New England and Massachusetts Chapter of NCGA, MITRE Corp., MA, December 8, 1982.

Automating the design of graphical presentations. Bell Laboratories, Holmdel, NJ, May 17, 1983.

Computers and designers. *Applied Semiotics for Design '83*, Rhode Island School of Design, Providence, RI, June 7, 1983.

Automating the design of graphical presentations. Naval Research Laboratory, Washington, DC, June 24, 1983.

Designing interactive books. *The New Graphics*, MIT Visible Language Workshop, Cambridge, MA, July 20, 1983.

Research in computer graphics at Brown University. Atari Research Center, Cambridge, MA, March 13, 1984.

Automating the creation of explanatory pictures. MIT Media Laboratory, Cambridge, MA, April 24, 1984.

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Automating the creation of explanatory pictures. University of Toronto, Department of Computer Science, Toronto, Canada, October 23, 1984.

Designing for the electronic book: Two approaches. *Japan–USA Joint Symp. on Computers, Information and Design*, Osaka, Japan, October 31–November 2, 1984.

Automating the creation of pictorial explanations. University of Toronto, Department of Computer Science, Toronto, Canada, March 26, 1985.

Automating the creation of pictorial explanations. Columbia University, Department of Computer Science, New York, NY, April 1, 1985.

Automating the creation of pictorial explanations. Carnegie–Mellon University, Department of Computer Science, Pittsburgh, PA, April 9, 1985.

Automating the creation of pictorial explanations. University of Pennsylvania, Department of Computer and Information Science, Philadelphia, PA, April 15, 1985.

Automating the creation of pictorial explanations. Xerox PARC, Computer Systems Laboratory, Palo Alto, CA, May 6, 1985.

A graphical interface design system. *1987 Computer Graphics Symposium*, Hewlett-Packard Research Labs, Palo Alto, CA, June 9–10, 1987.

A graphical interface design system. Xerox PARC, Intelligent Systems Laboratory, Palo Alto, CA, June 11, 1987.

A graphical interface design system. Digital Equipment Corporation, Systems Research Center, Palo Alto, CA, June 12, 1987.

A graphical interface design system. University of Southern California, Information Sciences Institute, Marina del Rey, CA, August 3, 1987.

A graphical interface design system. Bell Laboratories, Murray Hill, NJ, August 25, 1987.

Automating the creation of graphical interfaces. Bellcore, Morristown, NJ, January 29, 1988.

Editing, presenting, and exploring large graphical hypertexts. Medical Informatics Lecture Series, Columbia Presbyterian Medical Center, New York, NY, March 17, 1988.

Automating the creation of graphical interfaces. IBM T.J. Watson Research Center, Yorktown Heights, NY, March 18, 1988.

Knowledge-based graphical interface design. *1988 Computer Graphics Symposium*, Hewlett-Packard, Fort Collins, CO, June 21–22, 1988.

Knowledge-based graphical interface design. Air Force Human Resources Laboratory, Wright-Patterson AFB, OH, July 21, 1988.

Knowledge-based graphical interface design. Schlumberger-Doll Research, Ridgefield, CT, September 16, 1988.

Hypertext, hypermedia, and beyond. Columbia University Seminar on Computers, Man, and Society, New York, NY, September 22, 1988.

Designing large hypermedia documents with IGD. *Hypertext Design Workshop*, Sunapee, NH, October 16–19, 1988.

Knowledge-based graphical interface design. Philips Research, Briarcliff Manor, NY, October 28, 1988.

Knowledge-based graphical interface design. The George Washington Univ. EE & CS Lecture Series, Washington, DC, November 22, 1988.

Graphical user interfaces. *New England Consortium for Undergraduate Science Education Workshop on Computer Graphics*. Wellesley College, Wellesley, MA, January 20–21, 1989.

Knowledge-based graphics. *1989 Computer Graphics Symposium*, Hewlett-Packard, Ft. Collins, CO, June 14–15, 1989.

Knowledge-based graphics. Grumman Data Systems, Woodbury, NY, September 29, 1989.

Hypertext, hypermedia, and beyond. *Technology Studies Seminar*, Gannett Center for Media Studies, Columbia University, New York, NY, October 23–27, 1989.

Knowledge-based graphical interface design. *Programming the Future Colloquium Series*, University of Maryland, College Park, MD, December 4, 1989.

Research directions in user interface design. *New England Regional Computer Program Conference on Computer Graphics*, US Coast Guard Academy, New London, CT, December 8, 1989.

Knowledge-based graphics. *ACM/SIGGRAPH NY Chapter*, January 26, 1990.

Knowledge-based graphical explanations. *Graphik und KI (Workshop on Graphics and AI)*, sponsored by Gesellschaft für Informatik e.V. and Gesellschaft für Mathematik und Datenverarbeitung mbH, Königswinter, Federal Republic of Germany, April 3–4, 1990.

Research in knowledge-based graphics. Gesellschaft für Mathematik und Datenverarbeitung mbH (German National Research Institute for Computer Science), Sankt Augustin, Federal Republic of Germany, April 4, 1990.

Knowledge-based graphical explanations. Deutsches Forschungszentrum für Künstliche Intelligenz (German Research Center for Artificial Intelligence), Saarbrücken, Federal Republic of Germany, April 5, 1990.

Knowledge-based graphics. Harvard University Center for Research in Computing Technology Colloquium, Cambridge, MA, May 9, 1990.

Generating coordinated multimedia explanations. *Workshop on Task Communication through Natural Language and Graphics*, University of Pennsylvania, Philadelphia, PA, May 29–30, 1990.

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Visualizing n -dimensional virtual worlds. *ACM/SIGGRAPH NY Chapter*, New York, NY, February 21, 1991.

AI and graphics. Graphics Lunch Series, Department of Computer Science, Princeton University, Princeton, NJ, March 12, 1991.

Knowledge-based graphics and virtual worlds. Bellcore, Morristown, NJ, March 20, 1991.

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If electronic books are the answer, then what's the *next* question? Dept. of Computer Science, University of Washington, Seattle, WA, June 3, 1991.

Knowledge-based interfaces and virtual worlds. Citicorp Corporate Technology, New York, NY, June 20, 1991.

Virtual worlds for visualizing data. Digital Equipment Corporation, Systems Research Center, Palo Alto, CA, June 21, 1991.

Virtual worlds for visualizing data. GTE Laboratories, Waltham, MA, July 10, 1991.

Generating multimedia explanations. US Air Force Armstrong Lab Workshop on Automatic Generation of Technical Manuals, Palo Alto, CA, September 9–12, 1991.

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Virtual worlds for visualizing information. Media Lab, MIT, Cambridge, MA, April 2, 1992.

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Knowledge-based graphics and virtual worlds. Tecnopolis CSATA Novus Ortus, Bari, Italy, May 25, 1992.

Virtual worlds for visualizing information. *AVI '92 (International Workshop on Advanced Visual Interfaces)*, Rome, Italy, May 27–29, 1992.

Virtual worlds for visualizing information. Information Systems Laboratory, GE Research and Development Center, Schenectady, NY, June 30, 1992.

Knowledge-based graphics and virtual worlds. *GWAI '92 (German Conference on Artificial Intelligence)*, Bonn, Germany, August 31–September 3, 1992.

Virtual worlds for visualizing information. Max-Planck-Institut für Informatik, Saarbrücken, Germany, September 7, 1992.

Keynote address: See what I mean: Intention and visual language. *1992 IEEE Workshop on Visual Languages*, Seattle, WA, September 15–18, 1992.

Virtual worlds for visualizing business data. Merrill Lynch, New York, NY, October 27, 1992.

Virtual worlds for visualizing information. *Supercomputing '92*, Minneapolis, MN, November 16–20, 1992.

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Automated design of data visualizations, *ONR Workshop on Data Visualization*, Darmstadt, Germany, July 6–8, 1993.

Virtual worlds for visualizing information. Department of Computer Science, Purdue University, West Lafayette, IN, August 10, 1993.

Knowledge-based graphics and virtual worlds. *IJCAI '93 (13th Int. Joint Conf. on AI)*, Chambéry, France, August 29–September 3, 1993.

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Knowledge-based multimedia and virtual worlds, *New Horizons in Physics Lecture Series: Multimedia*, SUNY, New Paltz, NY, October 14, 1993.

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Augmented reality. *5th EFDPM Washington DC Virtual Reality Conference*, Education Foundation of the Data Processing Management Association, Washington, DC, November 1–2, 1993.

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Virtual worlds for visualizing information. Fraunhofer Institute for Computer Graphics, Rostock, Germany, March 15, 1994.

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Keynote address: Knowledge-based graphics and virtual worlds. *Simulation & Integration '94*, Magdeburg, Germany, March 17–18, 1994.

Virtual worlds for visualizing information. Institute for the Learning Sciences, Northwestern University, Evanston, IL, April 15, 1994.

User interfaces for the 21st century: Knowledge-based graphics and virtual worlds. *Educating America for the 21st Century: Driving Forces*, Institute for Learning Technologies, Columbia University, April 21, 1994.

Discussant, Interacting in 3-D, *CHI '94*, Boston, MA, April 24–28, 1994.

Redefining the user interface: Augmented reality. *Universal Personal Communications: Achieving Global Wireless Connectivity*, Columbia University, New York, NY, May 13, 1994.

Keynote address: Knowledge-based virtual worlds and augmented reality. *Virtual Reality Applications '94*, Leeds, UK, June 7–9, 1994.

Setting up a virtual reality system. *New York Virtual Reality Expo '94*, New York, NY, November 29–December 2, 1994.

Augmented reality for task training and assistance. *ONR Workshop on Virtual Environments*. Arlington, VA, March 21–22, 1995.

Augmented reality: Seeing on top of the world. IBM Almaden Research Center, CA, April 13, 1995.

Augmented reality: Seeing on top of the world. Polytechnic University, New York, NY, April 24, 1995.

Discussant, Innovative Interaction, *CHI '95*, Denver, CO, May 7–11, 1995.

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Virtual worlds for visualizing information. IBM T.J. Watson Research Center, Hawthorne, NY, August 24, 1995.

Augmented reality. *International Symposium in Electronics and Computing Technology 1995*, Instituto Tecnologico de La Laguna, Torreon, Coahuila, Mexico, October 19–21, 1995.

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Adding insight through animation in augmented reality. *Computer Animation '96*, Geneva, Switzerland, June 3–4, 1996. (Abstract appears as Feiner, S. Adding insight through animation in augmented reality, *Proc. Computer Animation '96*, June 3–4, 1996, Geneva, Switzerland, IEEE Comp. Soc. Press, 14–15.)

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3D user interfaces for interacting with information. AT&T Laboratories, Murray Hill, NJ, February 19, 1997.

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Seeing on top of the world. Department of Computer Science Lecture Series, University of Maryland Baltimore County, Baltimore, MD, May 5, 1997.

Knowledge-based visualization of computer networks. *CODATA Euro-American Workshop on Visualization of Information and Data*. Ministère de l'Education Nationale de l'Enseignement Supérieur de la Recherche, Paris, France, June 24–25, 1997.

Knowledge-based 3D graphics. *IJCAI '97 Workshop on Intelligent Multimodal Systems*, Nagoya, Japan, August 23, 1997.

Seeing on top of the world. Mixed Reality Systems Laboratory Inc. Yokohama, Japan, August 26, 1997.

Seeing on top of the world: Research in augmented reality. *Euro-VR '97*, Amsterdam, The Netherlands, November 10–11, 1997.

Trick or tree: The role of hierarchy in the user interface. Keynote talk: *Graphical User Interfaces for Hierarchies*, Human-Computer Interaction Laboratory (Also, Inst. for Systems Research, University of Maryland and Harvard University, Joint Lecture Series), University of Maryland, College Park, MD, December 4–5, 1997.

Seeing on top of the world. *Real Time Computer Graphics for Virtual Environments*, UK Engineering and Physical Sciences Research Council, London, England, December 18, 1997.

Automated generation of graphics for coordinated multimedia presentations. *CMC '98 (Second Int. Conf. on Cooperative Multimodal Communication)*, Tilburg, The Netherlands, January 28–30, 1998.

Seeing on top of the world: Research in augmented reality. *ICASE/LaRC/ARO/NSF Workshop on Computational Aerosciences in the 21st Century*, Hampton, VA, April 22–24, 1998.

Wearing it out: First steps toward mobile augmented reality systems. *Informatik '98*, Magdeburg, Germany, September 21–25, 1998.

Wearing it out: First steps toward mobile augmented reality systems. Siemens Corporate Research, Princeton, NJ, November 10, 1998.

The 1968 Columbia revolt as told by the Mobile Journalist's Workstation (with J. Pavlik). *Columbia University Seminar on Computers, Man, and Society*, New York, NY, November 18, 1998.

Wearing it out: First steps toward mobile augmented reality systems. Microsoft Research, Redmond, WA, December 10, 1998.

Wearing it out: First steps toward mobile augmented reality systems. *ISMР '99 (First International Symposium on Mixed Reality)*, Yokohama, Japan, March 9–11, 1999.

Wearing it out: First steps toward mobile augmented reality systems. Sony Computer Science Laboratory, Tokyo, Japan, March 12, 1999.

Wearing it out: First steps toward mobile augmented reality systems. Shell Distinguished Lecturer Series, Department of Computer Science, Texas A&M University, College Station, TX, March 31, 1999.

A prototype mobile augmented reality system. *Defense Science and Technology Seminar on Emerging Technologies: Augmented Reality for the Mobile Warfighter*. (Sponsored by Deputy Under Secretary of Defense for Science and Technology; Chief of Naval Research, ONR; Director, DARPA.) Arlington, VA, April 9, 1999.

Research in augmented reality. Columbia University Double Discovery Program for Tenth Graders, New York, NY, April 16, 1999.

Wearing it out: First steps toward mobile augmented reality systems. IBM T.J. Watson Research Center, Hawthorne, NY, April 30, 1999.

Wearing it out: First steps toward mobile augmented reality systems. *1999 Eurographics Workshop on Virtual Environments*, Vienna, Austria, May 31–June 1, 1999.

Wearing it out: First steps toward mobile augmented reality systems. New York SIGCHI Chapter, New York, NY, June 14, 1999.

Thinking on our feet: Wearable computing and artificial intelligence. *AAAI '99 (Sixteenth National Conf. on Artificial Intelligence)*, Orlando, FL, July 18–22, 1999.

Environment management. *DARPA/NIST/NSF Workshop on Research Issues in Smart Computing Environments*, Atlanta, GA, July 25–26, 1999.

Mobile augmented reality for the urban explorer. *UM3 '99 (Urban Multi-Media/3D Mapping)*, University of Tokyo, Tokyo, Japan, September 30–October 2, 1999. (Abstract appears as S. Feiner, Mobile augmented reality for the urban explorer. *Proc. UM3 '99 (Int. Workshop on Urban 3D/Multi-Media Mapping)*, Tokyo, Japan, September 30–October 2, 1999, 127–129.)

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Wearing it out: First steps toward mobile augmented reality systems. Alias|wavefront, Toronto, Canada, November 1, 1999.

Wearing it out: First steps toward mobile augmented reality systems. Computer Science Colloquium Series. University of Toronto, Department of Computer Science, Toronto, Canada, November 2, 1999.

Wearing it out: First steps toward mobile augmented reality systems. Computer Graphics Lab, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, November 25, 1999.

Wearing it out: First steps toward mobile augmented reality systems. Philadelphia SIGCHI Chapter, Philadelphia, PA, January 12, 2000.

Wearing it out: First steps toward mobile augmented reality systems. Computer Science Colloquium Series. University of Alberta, Department of Computing Science, Edmonton, Canada, January 21, 2000.

Discussant, *Invisible Computing: Designing for Hidden Devices*, New York ACM SIGGRAPH and Digital Image Design, New York, NY, February 18, 2000.

Wearing it out: First steps toward mobile augmented reality systems. Distinguished Lecture Series on the Future of Human-Computer Interaction. Oregon Graduate Institute of Science and Technology, Beaverton, OR, May 19, 2000.

User interface research at Columbia University. MIT Enterprise Forum, New York, NY, October 25, 2000.

Mobile augmented reality systems. Distinguished Lecture Series in Pervasive Information Systems. Depts. of Electrical Engineering and Computer Science, Princeton University, Princeton, NJ, April 20, 2001.

Mobile augmented reality systems. *GASA Summer Seminar 2001*, Universidade Nova de Lisboa, Lisbon, Portugal, June 6, 2001.

Mobile augmented reality systems. *Computer Science and Digital Communication Seminar*, Universitat Pompeu Fabra, Barcelona, Spain, June 12, 2001.

Environment management for augmented reality. *Triangle Computer Science Distinguished Lecturer Series*, Chapel Hill/Durham/Raleigh, North Carolina, November 5, 2001.

Environment management for mobile augmented reality systems. *Distinguished Lecture Series*, Computer Science Department, State University of New York, Stony Brook, NY, December 14, 2001.

Mobile augmented reality systems. Centro per la Ricerca Scientifica e Tecnologica, Istituto Trentino di Cultura, Povo, Italy, May 20, 2002.

The edges of wayfaring. *SEGD 2002 (Soc. for Environmental Graphic Design 2002 Annual Conference)*, Denver, CO, May 29–June 1, 2002.

Mobile augmented reality systems. INRIA Rhone-Alpes, Saint-Ismier Cedex, France, June 18, 2002.

Mobile augmented reality systems. *VRIC 2002 (Virtual Reality Int. Conf.)*, Laval, France, June 19–21, 2002.

Augmented reality. *Beyond Mapping: The Challenges of New Technologies in the Geographic Information Sciences*, National Research Council Mapping Science Committee, The National Academies, Washington DC, August 22–23, 2002.

Mobile augmented reality systems. *GIScience 2002 (Second Int. Conf. on Geographic Information Science)*, Boulder, CO, September 25–28, 2002.

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Merging image and reality in augmented reality. *The (Re)Structured Screen*, Eyebeam Atelier, New York, NY, November 11, 2002.

User interface design for wearable augmented reality systems. IBM T.J. Watson Research Center, Hawthorne, NY, December 6, 2002.

Keynote: Mobile augmented reality systems. *MUM 2002 (First Int. Conf. on Mobile and Ubiquitous Multimedia)*, Oulu, Finland, December 11–13, 2002.

User interface design for wearable augmented reality systems. *Human Computer Interaction Seminar Series*, HCI Institute, Carnegie Mellon University, Pittsburgh, PA, February 12, 2003.

User interface design for wearable augmented reality systems. *Distinguished Seminar Series*, Electrical and Computer Engineering, Rutgers University, New Brunswick, NJ, March 12, 2003.

Keynote: Taking it to the streets: How virtual reality will change mobile computing. *IEEE Virtual Reality 2003*, Los Angeles, CA, March 22–26, 2003. (*Proc. IEEE Virtual Reality 2003*, IEEE Computer Society Press, 2–3.)

User interface design for wearable augmented reality systems. *Geospatial Intelligence Information Visualization Researchers Meeting*, Advanced Research and Development Activity, Monterey, CA, April 29, 2003.

Wearable augmented reality systems. *2nd CREST Workshop on Advanced Computing and Communicating Techniques for Wearable Information Playing*, Nara Institute of Science and Technology, Nara, Japan, May 23–24, 2003.

Taking it to the streets: How virtual reality will change mobile computing. *The 21st IEEE Kansai Section Lecture*, Osaka University, Osaka, Japan, May 26, 2003.

User interfaces for mobile augmented reality systems. *VVG 2003 (First Int. Conf. on Vision, Video and Graphics)*, Institute of Mathematics and its Applications, Bath, UK, July 10–11, 2003. (Abstract appears as S. Feiner, User interfaces for mobile augmented reality systems. In P. Hall and P. Willis (eds.), *Proc. Vision, Video, and Graphics 2003*, Eurographics Association, Aire-la-Ville, Switzerland, 2003, 125–126.)

Keynote: Augmented reality for architecture and construction: Early prototypes and future musings. *CONVR 2003 (Conference on Construction Applications of Virtual Reality)*, Blacksburg, VA, September 24–26, 2003.

Augmented reality for augmented space. *Augmented Space: Media Art for an Urban Environment*, Lower Manhattan Cultural Council, New York, NY, November 25, 2003.

AR/VR for enhanced-reality mobile communication. *NTT DoCoMo 4G Tech Forum*, NTT DoCoMo Research and Development Center, Yokosuka, Japan, March 15, 2004.

Taking it to the streets: How virtual reality will change mobile computing. *HCI Forum Inaugural Distinguished Lecture*, Iowa State University, Ames, Iowa, April 15, 2004.

Keynote: Turning VR inside out: Thoughts about where we are heading. *VRST 2004 (ACM Symp. on Virtual Reality Software and Technology)*, Hong Kong, November 10–12, 2004.

Situated documentaries and virtual site models. Università degli Studi di Lecce, Lecce, Italy, February 5, 2005.

Discussant, Design, development, and evaluation of 3D UIs. *IEEE VR 2005 Workshop on New Directions in 3D User Interfaces*, Bonn, Germany, March 12, 2005.

Here, there, and everywhere: User interfaces and spatial context. *HCI Seminar Series*, Computer Science and Artificial Intelligence Laboratory, MIT, Cambridge, MA, April 22, 2005.

Keynote: Inside out and outside in: User interfaces and spatial context. *GIS Planet 2005 (Second Int. Conf. and Exhibition on Geographic Information)*, Estoril, Portugal, May 30–June 2, 2005. (Invited paper appears as S. Feiner, H. Benko, S. Guven, and E. Ishak, Inside out and outside in: User interfaces and spatial context. *Proc. GIS Planet 2005*, May 30–June 2, 2005.)

Inside out and outside in: User interfaces and spatial context. INRIA Futurs, Orsay, France, June 16, 2005.

Mixed and augmented reality for archaeological and historic visualization. *PEACH (Personal Experience with Active Cultural Heritage) Workshop*, Centro per la Ricerca Scientifica e Tecnologica, Istituto Trentino di Cultura, Povo, Italy, November 29, 2005.

Keynote: A moving experience: Mobile augmented reality and entertainment. *INTETAIN 2005 (INtelligent Technologies for interactive enterTAINment)*, Madonna di Campiglio, Italy, November 30–December 2, 2005.

Mixed and augmented reality for visualizing historic and archaeological sites. *The Computer—The Once and Future Medium for the Social Sciences and Humanities, Congress for the Humanities and Social Sciences 2006*, Canadian Federation for the Humanities and Social Sciences, Toronto, Canada, May 30, 2006.

Mixed and augmented reality for archaeological and historical visualization. Basser Seminar Series, The University of Sydney, Sydney, Australia, August 14, 2006.

Research in mobile user interfaces at Columbia University. HAIL Seminar Series, CSIRO ICT Centre, Sydney, Australia, August 15, 2006.

Survey: Interaction techniques for 3D user interfaces. *HxI Science Workshop on Augmentation Interfaces for Individuals and Teams*, NICTA (National Information and Communications Technology Australia), Sydney, Australia, August 16–18, 2006.

Mixed and augmented reality for archaeological and historical visualization. *HxI Science Workshop on Augmentation Interfaces for Individuals and Teams*, NICTA (National Information and Communications Technology Australia), Sydney, Australia, August 16–18, 2006.

Keynote: TBA. *AUIC 2007 (Eighth Australasian User Interface Conference)*, Ballarat, Victoria, Australia, January 30–February 2, 2007.

AWARDS

American Society for Training and Development 1990 Instructional Technology Research Award (with K. McKeown).

1991 Office of Naval Research Young Investigator Award.

Honorable Mention, 1996 American Institute for Architectural Research/Architecture Awards for Architectural Research (with A. Webster, B. MacIntyre).

SERVICE: EDITORIAL BOARDS & PROFESSIONAL ORGANIZATIONS

Member of editorial board, *Electronic Publishing* (Wiley) (since 1988)

Member of editorial board, *Springer International Series on Human-Computer Interaction* [formerly *Kluwer International Series on Human-Computer Interaction*] (since 2002)

Member of editorial board, *Virtual Reality (Journal of the Virtual Reality Society)* (Springer) (since 1994)

Associate editor, *ACM Transactions on Graphics* (1995–2004)

Member of editorial board, *IEEE Transactions on Visualization and Computer Graphics* (1994–2000)

Associate editor, *ACM Transactions on Information Systems* (1990–1995)

Member of executive board, IEEE Computer Society Technical Committee on Visualization and Graphics (1993–2000)

Member of executive committee, IEEE Computer Society Task Force on Human-Centered Information Systems (since 1997)

Member of steering committee, *ACM Symposium on Virtual Reality Software and Technology* (since 2004)

Member of steering committee, *IEEE Symposium on Information Visualization* (1997–2006)

Member of steering committee, *IEEE and ACM International Symposium on Mixed and Augmented Reality* (since 2000)

Member of steering committee, IEEE Computer Society Technical Committee on Wearable Information Systems (since 2001)

Member, ACM Scholars' Advisory Group (1994)

Member, Dexter Hypertext Research Group (1988–90)

Participant, 1990 DARPA Workshop on Intelligent Documentation
 Participant, 1991 DARPA ISAT Summer Study on Intelligent Interfaces
 Member, 1992 National Research Council NRL Workshop in Computer Sciences and Artificial Intelligence
 Invited participant, ACM SIGGRAPH Future Search Conference (1994)
 Member, *IEEE Transactions on Visualization and Computer Graphics* Editor-in-Chief Search Committee (1994)
 Member, NRC CSTB Workshop, "Towards an Every-Citizen Interface to the National Information Infrastructure" (1996)
 Member, IBM Mobile Computing Scientific Advisory Board (since 1996)
 Panelist, NIH and NSF Workshop on Visualization Research Challenges (2005)
 Member, DARPA IXO Immersive Operations Panel (2006)
 Panelist for NSF, NRL

SERVICE: CONFERENCES AND WORKSHOPS

Member of organizing and program committees, *AAAI-88 Workshop on AI and Hypertext*
 Member of organizing and program committees, *IJCAI-89 Workshop on Intelligent Interfaces*
 Member of program committee, *ACM Hypertext '89*
 Member of program committee, *ACM COIS '90 (Office Information Systems)*
 Member of program committee, *ACM UIST '90 (User Interface Software and Technology)*
 Member of program committee, *AAAI-91 (Ninth National Conf. on Artificial Intelligence)*
 Member of organizing and program committees, *AAAI-91 Workshop on Intelligent Multimedia Interfaces*
 Member of program committee, *ACM COCS '91 (Organizational Computing Systems)*
 Member of program committee, *ACM UIST '91 (User Interface Software and Technology)*
 Member of program committee, *ACM Hypertext '91*
 Corresponding member of papers program committee, *ACM CHI '92 (Human Factors in Computing Systems)*
 Member of demonstrations program committee, *ACM CHI '92*
 Member of program committee, *AVI '92 (Advanced Visual Interfaces)*
 Member of program committee, *ACM UIST '92 (User Interface Software and Technology)*
 Member of program committee, *1993 International Workshop on Intelligent User Interfaces*
 Associate papers chair, *INTERCHI '93 (ACM CHI '93 + IFIP INTERACT '93)*
 Member of demonstrations program committee, *INTERCHI '93 (ACM CHI '93 + IFIP INTERACT '93)*
 Member of program committee, *AAAI-93 (Eleventh National Conf. on Artificial Intelligence)*
 Co-chair of program committee, *ACM Multimedia '93*
 Member of program committee, *ACM OOPSLA '93 (Object-Oriented Programming Systems, Languages, and Applications)*
 Co-chair of symposium, *IEEE 1993 Symposium on Research Frontiers in Virtual Reality*
 Member of organizing and program committees, *AAAI Spring '94 Symposium on Intelligent Multi-Media Multi-Modal Systems*
 Associate papers chair, *ACM CHI '94 (Human Factors in Computing Systems)*
 Member of organizing and program committees, *Digital Libraries '94*
 Member of program committee, *AVI '94 (Advanced Visual Interfaces)*

Co-chair of program committee, *ACM VRST '94 (Virtual Reality Software and Technology)*
 Member of program committee, *IEEE Visualization '94*
 Chair of program committee, *ACM UIST '94 (User Interface Software and Technology)*
 Co-chair of program committee, *IEEE VRAIS '95 (Virtual Reality Annual International Symposium)*
 Member of program committee, *ACM 1995 Symposium on Interactive 3D Graphics*
 Member of program committee, *1995 International Workshop on Virtual Reality and Scientific Visualization*
 Member of program committee, *ACM CHI '95 (Human Factors in Computing Systems)*
 Member of papers committee, *ACM SIGGRAPH '95*
 Member of program committee, *Eurographics '95*
 Member of program committee, *IEEE Visualization '95*
 Member of program committee, *ISOTAS '96 (International Symposium on Object Technologies for Advanced Software)*
 Member of program committee, *IEEE VRAIS '96 (Virtual Reality Annual International Symposium)*
 Member of papers meta-review committee, *ACM CHI '96 (Human Factors in Computing Systems)*
 Member of papers committee, *ACM SIGGRAPH '96*
 Member of program committee, *IEEE Visualization '96*
 Member of extended program committee, *ACM Multimedia '96*
 Member of program committee, *IEEE VRAIS '97 (Virtual Reality Annual International Symposium)*
 Member of program committee, *Graphics Interface '97*
 Member of program committee, *Computer Graphics International '97*
 Member of technical sketches committee, *ACM SIGGRAPH '97*
 Member of program committee, *IJCAI '97 Workshop on Intelligent Multimodal Systems*
 Co-chair of program committee, *ACM VRST '97 (Virtual Reality Software and Technology)*
 Member of program committee, *1997 Int. Symp. on Wearable Computers*
 Member of program committee, *IEEE Visualization '97*
 Member of symposium committee, *IEEE Information Visualization '97*
 Member of program committee, *IUI '98 (Int. Conf. on Intelligent User Interfaces)*
 Member of program committee, *1998 Int. Conf. on Web-Based Modeling & Simulation (1998 SCS Western Multiconf. on Computer Simulation)*
 Member of program committee, *IEEE VRAIS '98 (Virtual Reality Annual International Symposium)*
 Associate papers chair, *ACM CHI '98 (Human Factors in Computing Systems)*
 Member of papers committee, *ACM SIGGRAPH '98*
 Member of program committee, *CVIR '98 (ACL/COLING '98 Workshop on Content Visualization and Intermedia Representations)*
 Member of program committee, *ACM VRST '98 (Virtual Reality Software and Technology)*
 Member of program committee, *IEEE Visualization '98*
 Member of program committee, *IEEE ISWC '98 (Int. Symp. on Wearable Computers)*
 Member of program committee, *IEEE IWAR '98 (Int. Workshop on Augmented Reality)*
 Member of program committee, *IUI '99 (Int. Conf. on Intelligent User Interfaces)*

Member of conference committee, *ISMР '99 (First Int. Symp. on Mixed Reality)*
 Member of program committee, *IEEE Virtual Reality '99 (formerly IEEE VRAIS)*
 Member of program committee, *EGVE '99 (Eurographics Workshop on Virtual Environments '99)*
 Member of program committee, *IEEE and ACM IWAR '99 (Int. Workshop on Augmented Reality)*
 Member of program committee, *ACM UIST '99 (User Interface Software and Technology)*
 Member of program committee, *IEEE Visualization '99*
 Member of program committee, *IUI 2000 (Int. Conf. on Intelligent User Interfaces)*
 Member of program committee, *AAAI Spring 2000 Symposium on Smart Graphics*
 Co-chair of program committee, *IEEE Virtual Reality 2000*
 Co-chair of best paper awards committee, *IEEE Virtual Reality 2000*
 Member of program committee, *DARE 2000 (Designing Augmented Reality Environments)*
 Member of program committee, *Pacific Graphics 2000*
 Member of program committee, *IEEE Visualization 2000*
 Member of program committee, *IEEE Information Visualization 2000*
 Member of program committee, *IEEE and ACM ISAR 2000 (Int. Symp. on Augmented Reality)*
 Co-chair of program committee, *ISMР 2001 (Second Int. Symp. on Mixed Reality)*
 Member of program committee, *IEEE Virtual Reality 2001*
 Member of best paper awards committee, *IEEE Virtual Reality 2001*
 Member of program committee, *Smart Graphics 2001*
 Member of program committee, *VAA '01 (Int. Symp. on Virtual and Augmented Architecture)*
 Associate papers chair, *ACM CHI 2001 (Human Factors in Computing Systems)*
 General chair of symposium, *IEEE Information Visualization 2001*
 Member of program committee, *IEEE Information Visualization 2001*
 General co-chair of symposium, *IEEE and ACM ISAR 2001 (Int. Symp. on Augmented Reality)*
 Member of program committee, *Pacific Graphics 2001*
 Member of program committee, *IUI 2002 (Int. Conf. on Intelligent User Interfaces)*
 Associate papers chair, *ACM CHI 2002 (Human Factors in Computing Systems)*
 Member of program committee, *First Int. Symp. on 3D Data Processing, Visualization and Transmission 2002*
 Member of program committee, *IEEE Virtual Reality 2002*
 Member of program committee, *Smart Graphics 2002*
 Member of program committee, *CODATA Workshop on Information Visualization, Presentation, and Design 2002*
 Member of papers committee, *ACM SIGGRAPH 2002*
 Member of program committee, *IEEE and ACM ISMAR 2002 (Int. Symp. on Mixed and Augmented Reality)*
 Member of program committee, *IEEE Information Visualization 2002*
 Member of best paper awards committee, *IEEE Information Visualization 2002*
 Member of program committee, *IUI 2003 (Int. Conf. on Intelligent User Interfaces)*
 Member of program committee, *ACM 2003 Symposium on Interactive 3D Graphics*
 Member of program committee, *IEEE Virtual Reality 2003*
 Member of program committee, *Virtual Reality International Conference 2003*

Member of program committee, *WWW 2003 Hypermedia track*
 Member of program committee, *Smart Graphics 2003*
 Member of papers committee, *ACM SIGGRAPH 2003*
 Co-chair of program committee, *IEEE ISWC 2003 (Int. Symp. on Wearable Computers)*
 Member of program committee, *IEEE and ACM ISMAR 2003 (Int. Symp. on Mixed and Augmented Reality)*
 General chair of conference, *ACM UIST 2004 (User Interface Software and Technology)*
 Member of program committee, *IEEE Virtual Reality 2004*
 Member of program committee, *IUI 2004 (Int. Conf. on Intelligent User Interfaces)*
 Member of program committee, *CADUI 2004 (Computer-Aided Design of User Interfaces)*
 Member of program committee, *Smart Graphics 2004*
 Member of program committee, *IEEE ISWC 2004 (Int. Symp. on Wearable Computers)*
 Area chair for program committee, *IEEE and ACM ISMAR 2004 (Int. Symp. on Mixed and Augmented Reality)*
 Member of program committee, *ACM VRST 2004 (Virtual Reality Software and Technology)*
 Associate papers chair, *ACM CHI 2005 (Human Factors in Computing Systems)*
 Member of program committee, *Smart Graphics 2005*
 Area chair for program committee, *IEEE and ACM ISMAR 2005 (Int. Symp. on Mixed and Augmented Reality)*
 Member of program committee, *ACM VRST 2005 (Virtual Reality Software and Technology)*
 Member of program committee, *IEEE TableTop 2006 (Int. Workshop on Horizontal Interactive Human-Computer Systems)*
 Member of program committee, *IUI 2006 (Int. Conf. on Intelligent User Interfaces)*
 Member of program committee, *ACM I3D 2006 (Symp. on Interactive 3D Graphics and Games)*
 Member of program committee, *3DPVT 2006 (Third Int. Symp. on 3D Data Processing, Visualization, and Transmission)*
 Member of program committee, *Smart Graphics 2006*
 Member of program committee, *IEEE ISWC 2006 (Int. Symp. on Wearable Computers)*
 Area chair for program committee, *IEEE and ACM ISMAR 2006 (Int. Symp. on Mixed and Augmented Reality)*
 Member of program committee, *ACM VRST 2006 (Virtual Reality Software and Technology)*
 Member of program committee, *2007 Microsoft Academic Days on Game Development in Computer Science Education.*
 Member of program committee, *IEEE 3DUI 2007 (Symp. on 3D User Interfaces)*
 Associate papers chair, *ACM CHI 2007 (Human Factors in Computing Systems)*

PH.D. STUDENTS

Dorée Seligmann, *Interactive Intent-Based Illustration* (defended March 3, 1993; Lucent, now at Avaya Labs)
 David Kurlander, *Graphical Editing by Example* (defended March 31, 1993; Microsoft)
 Michelle Zhou, *Automated Generation of Visual Discourse* (defended October 9, 1998; IBM T.J. Watson Research Center)
 Blair MacIntyre, *Exploratory Programming of Distributed Augmented Environments* (defended December 17, 1998; College of Computing, Georgia Institute of Technology)
 Tobias Höllerer, *User Interfaces for Mobile Augmented Reality Systems* (defended May 5, 2003; Dept. of Computer Science, UC Santa Barbara)

Simon Lok, *Automated Layout of Information Presentations* (defended April 29, 2005; Lok Technology, Inc.)

Blaine Bell, *View Management for Distributed User Interfaces* (defended April 29, 2005; Schrödinger, LLC)

Christian Sandor, *A Software Toolkit and Authoring Tools for User Interfaces in Ubiquitous Augmented Reality* (coadvised with Gudrun Klinker), Technische Universität München (defended October 4, 2005; Canon Research)

Sinem Güven, *Authoring and Presenting Situated Media in Augmented and Virtual Reality* (defending April 28, 2006; IBM T.J. Watson Research Center)

Gábor Blaskó, *Input Devices and Interaction Techniques for Wearable and Mobile Computing* (defending May 8, 2006)